

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

5 Applicant(s): Grande et al.
Case: 2-1
Serial No.: 10/787,380
Filing Date: February 26, 2004
Group: 2841
10 Examiner: Abiy Getachew

Title: Method and Apparatus for Mounting a Modem to a Carrier Assembly

15 **APPEAL BRIEF**

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
20 Alexandria, VA 22313-1450

Sir:

Applicants hereby submit this renewed Appeal Brief in response to the final
25 Office Action, dated March 30, 2011, of claims 1 through 20 of the above-identified patent
application.

REAL PARTY IN INTEREST

The present application is assigned to Agere Systems Inc., as evidenced by an
30 assignment recorded on February 26, 2004 in the United States Patent and Trademark Office at
Reel 015030, Frame 0498. The assignee, Agere Systems Inc., is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

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STATUS OF CLAIMS

The present application was filed on February 26, 2004 with claims 1 through 20. Claims 1 through 20 are presently pending in the above-identified patent application. Claims 1-20 were rejected under 35 U.S.C. §102(b) as being anticipated by Giles et al. (United States Publication No. 2002/0118517). Claims 1, 8, and 14 are being appealed.

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 requires a modem module (FIG. 1: 200) for connecting to a carrier assembly (page 3, lines 1-30; FIG. 1: 170), comprising: circuitry for interfacing with a telephone line (page 2, lines 7-12); and one or more solder pads (FIG. 1: 160) for connecting a signal line of the modem module to the carrier assembly (page 2, lines 16-18, and page 4, lines 3-9).

Independent claim 8 requires a method for fabricating a modem module for connection to a carrier assembly (page 4, lines 1-24), comprising the steps of: providing circuitry on a printed circuit board for interfacing with a telephone line (page 2, lines 7-12); and providing one or more solder pads (FIG. 1: 160) on the printed circuit board for connecting a signal line of the modem module to the carrier assembly (page 2, lines 16-18, and page 4, lines 3-9).

Independent claim 14 requires a printed circuit board, comprising: modem circuitry for interfacing with a telephone line (page 2, lines 7-12); and one or more solder pads (FIG. 1: 160) for connecting a signal line of the modem circuitry to a carrier assembly (page 2, lines 16-18, and page 4, lines 3-9).

STATEMENT OF GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-20 (including appealed claims 1, 8 and 14) were rejected under 35 U.S.C. §102(b) as being anticipated by Giles et al.

ARGUMENT

Independent Claims 1, 8 and 14

Independent claim 1, 8 and 14 were rejected under 35 U.S.C. §102(b) as being anticipated by Giles et al. Regarding claim 1, for example, the Examiner asserts that Giles et al. discloses a modem module (par. 0041) for connecting to a carrier assembly, comprising: circuitry (pars. 0027, 0042, PCB 200 includes circuitry 202) for interfacing with a telephone line (par. 0014); and one or more solder pads (FIG. 2A, 206 on PCB 200) for connecting a signal line of said modem module (par. 0014) to said carrier assembly (FIG. 2A, 200).

In one aspect of the present invention, a modem module is provided that may be attached to a motherboard and thereby eliminates the need to recertify the motherboard. Appellants note that the Examiner does not allege that Giles et al. discloses solder pads *on the modem module*, as variously required by each independent claim. The Examiner references the solder pads 206 in FIG. 2A, *but these solder pads are on the PCB* (i.e., the “carrier assembly,” using the terminology of the current claims.

Giles et al. cannot be said to teach each limitation of the independent claims. Thus, the Examiner has not made a prima facie case of anticipation under 35 U.S.C. §102(b) .

The present claims and Giles et al. both operate in an environment where a first circuit assembly (a “modem module” in the context of the present claims, and a “chip component assembly 300” in the context of Giles et al.) interfaces with a second circuit assembly (a “carrier assembly” in the context of the present claims and a “PCB 200” in the context of Giles et al.).

Appellants note that the above rejection relies on structure from *both* the “chip component assembly 300” and the “PCB 200” in Giles et al. in forming the rejection of the claimed modem module.

Appellants submit that the present invention provides a patentable advancement in how the two assemblies are interconnected. In particular, Appellants are claiming a particular configuration of the first circuit assembly (i.e., a “modem module”) that is not disclosed or suggested by Giles et al. Appellants submit that the Examiner’s reliance on structure from the

PCB in rejecting the modem module is improper and fails to give patentable weight to the express terms of the independent claims. As discussed hereinafter, the present claims expressly require that the modem module *itself* includes one or more **solder pads** for connecting a signal line of the modem module to the carrier assembly.

5 A person of ordinary skill in the art recognizes that the term “solder pads” is a term of art that is distinct from more general terms used to convey an electrical connection, such as “terminal elements.” *Significantly, Giles et al. makes this distinction as well.* Giles et al. *only* references the solder pads 206 *on the PCB 200*. These solder pads 206 mate with first terminal elements 302A on the chip components 302. Giles et al. does not use the term “solder pads” to
10 describe *any* structure *on the chip component assembly 300*. The undeniable contrast in terminology is apparent in the following statement from par. 0043:

“In particular, chip component assembly 300 includes a plurality of chip components 302 arranged so that each contacts a respective solder pad 206.”

See also, for example, FIG. 2B, where the first terminal elements 302A on chip component
15 assembly 300 are shown in electrical connection with the solder pads 206 on the PCB 200. As shown in FIG. 2B, and described in par. 0059:

“respective first terminal elements 302A of chip components 302 are physically and electrically connected to electronic circuitry 202 (not shown) by way of solder pads 206”

20 As discussed in par. 0043, and shown in FIG. 2A, chip component assembly 300 (which is analogous to the claimed modem module) “includes a plurality of *chip components 302* arranged so that each contacts a respective solder pad 206.” (emphasis added). The chip components 302 and the first terminal elements 302A thereon are **not** solder pads. Clearly, Giles
25 would have referred to them as “solder pads” if such was intended.

In addition, the solder pads 206 of Giles do not connect a *signal line of the modem module* to the carrier assembly, as further variously required by each independent claim. Again, rather, the solder pads 206 connect the first terminal elements 302A of the *chip*

components 302” to the electronic circuitry 202 on the PCB 200. The solder pads 206 are “in communication with electronic circuitry of the printed circuit board.” See, Abstract.

5 In the Response to Arguments section of the final Office Action, the Examiner points to FIG. 2A and pars. 0010 and 0011, and asserts that the chip component (302) is mounted so that the terminal elements (302A) contact corresponding “solder pads on the PCB.” Appellants submit that solder pads on the PCB do not meet the claim requirement of solder pads on the modem module!

10 The Examiner further notes, relying on FIGS. 1 and 2A and par. 0041, that “PC card” may take the form of a modem card. It is noted that the “PC card” is element 100 from FIG. 1 and not the PCB 200 of FIG. 1 or 2A. Thus, there is no teaching that the PCB itself is a modem card. Thus, no portion of Giles et al. suggests solder pads on a modem card. *The only use of solder pads in Giles is limited to the PCB 200.*

15 Thus, Giles et al. do *not* disclose or suggest one or more solder pads (**on a modem module**) for *connecting a signal line of a modem module to a carrier assembly*. Independent claims 1, 8, and 14 require one or more solder pads (**on a modem module**) for connecting a *signal line of said modem module* to said carrier assembly.

Appellants respectfully request withdrawal of the rejection of independent claims 1, 8 and 14.

Conclusion

20 The rejections of the independent claims under section 103 in view of Hart and Ishikawa, alone or in combination, are therefore believed to be improper and should be withdrawn. The remaining rejected dependent claims are believed allowable for at least the reasons identified above with respect to the independent claims.

The attention of the Examiner and the Appeal Board to this matter is appreciated.

Respectfully,



Date: August 30, 2011

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APPENDIX

1. A modem module for connecting to a carrier assembly, comprising:
circuitry for interfacing with a telephone line; and

5 one or more solder pads for connecting a signal line of said modem module to
said carrier assembly.

2. The modem module of claim 1, further comprising a tip/ring connector for interfacing with
said telephone line.

10 3. The modem module of claim 1, further comprising a connection to a tip/ring connector.

4. The modem module of claim 1, wherein said carrier assembly is a motherboard.

15 5. The modem module of claim 1, wherein said one or more solder pads are soldered to
corresponding one or more solder pads on said carrier assembly.

6. The modem module of claim 1, wherein said modem assembly is fabricated on a printed
circuit board.

20 7. The modem module of claim 1, wherein said modem assembly is an integrated device.

8. A method for fabricating a modem module for connection to a carrier assembly, comprising
the steps of:

25 providing circuitry on a printed circuit board for interfacing with a telephone line;
and

providing one or more solder pads on said printed circuit board for connecting a
signal line of said modem module to said carrier assembly.

9. The method of claim 8, further comprising the step of providing a tip/ring connector for interfacing with said telephone line.

10. The method of claim 8, further comprising the step of connecting to a tip/ring connector.

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11. The method of claim 8, wherein said carrier assembly is a motherboard.

12. The method of claim 8, further comprising the step of soldering said one or more solder pads to corresponding one or more solder pads on said carrier assembly.

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13. The method of claim 8, further comprising the step of fabricating said modem assembly on a printed circuit board.

14. A printed circuit board, comprising:

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modem circuitry for interfacing with a telephone line; and

one or more solder pads for connecting a signal line of said modem circuitry to a carrier assembly.

15. The printed circuit board of claim 14, further comprising a tip/ring connector for interfacing with said telephone line.

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16. The printed circuit board of claim 14, further comprising a connection to a tip/ring connector.

17. The printed circuit board of claim 14, wherein said carrier assembly is a motherboard.

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18. The printed circuit board of claim 14, wherein said one or more solder pads are soldered to corresponding one or more solder pads on said carrier assembly.

19. The printed circuit board of claim 14, wherein said modem assembly is fabricated on a printed circuit board.

20. The printed circuit board of claim 14, wherein said modem assembly is an integrated device.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to § 1.130, 1.131, or 1.132 or entered by the Examiner and relied upon by appellant.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 CFR 41.37.